

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	BEN AVISON)
)
SERIAL NO:	10/073,636)
)
FILED:	FEBRUARY 11, 2002)
)
FOR:	APPARATUS FOR THE DECODING)
	OF VIDEO DATA IN FIRST AND)
	SECOND FORMATS)
)
ART UNIT:	2424)
)
EXAMINER:	ANNAN Q. SHANG)

APPELLANT'S APPEAL BRIEF

Mail Stop – Board of Patent
Appeals and Interferences
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

Applicant/Appellant, Ben Avison, and his Assignee, Pace Plc, file this Appeal Brief pursuant to 37 CFR §41.37 in support of their appeal to the Board of Patent Appeals and Interferences.



37 CFR §41.37(c)(1)(i)
Real Party In Interest

The real parties in interest are the Applicant/Appellant. Ben Avison, and his Assignee, Pace Plc.

37 CFR §41.37(c)(1)(ii)
Related Appeals and Interferences

There are no related appeals or interferences.

37 CFR §41.37(c)(1)(iii)
Status of the Claims

Claims 1, 2 and 5-12 are pending in the present patent application and are appealed herein. Claim 1 is an independent claim directed to a method of generating and processing data for display of video data. Claims 2, 5, 6 and 9 are dependent on Claim1, and Claims 3 and 4 have been cancelled. Claims 7 and 8 are dependent on Claim 9, and Claim 10 is dependent on Claim 9. Claim 11 is an independent claim relating to a method of generating a video display. Claims 12 is dependent on Claim 11.

In summary, Claims 1, 2, and 5-12 are rejected, are pending, and are on appeal. No claims have been allowed to date.

37 CFR §41.37(c)(1)(iv)
Status of Amendments

Applicant's/Appellant's original patent application claims priority from United Kingdom application number 0104785.1, filed February 27, 2001.

In an initial Office Action dated October 5, 2006, the Examiner rejected Claims 1 through 12 under 35 U.S.C. §102. The Examiner also rejected Claims 1 through 12 under 35 U.S.C. §102(e) as being anticipated by Zdepski et al. (U.S. Patent No. 6,445,738). In a response dated

April 3, 2007, Applicant/Appellant filed an Amendment, amending Claims 1, 5, 6, 11 and 12.

Thereafter, in a Final Office Action dated July 18, 2007, the Examiner again rejected Claims 1-12. Applicant/Appellant filed an Amendment in response dated September 21, 2007, amending Claims 1 and 11 and cancelling Claim 4. Following receipt of an Advisory Action on October 19, 2007, Applicant filed a Request for Continued Examination on January 14, 2008.

On March 21, 2008, the Examiner, in response to the Request for Continued Examination, rejected Claims 1-3 and 5-12 under 35 U.S.C. §103(a) as unpatentable over Zdepski et al in view of Du Lac (U.S. Patent No. 5,899,582). In response thereto, Applicant/Appellant filed an Amendment dated September 19, 2008, amending Claims 1 and 11 and cancelling Claim 3.

In response, the Examiner issued a Final Office Action dated January 7, 2009, rejecting Claims 1-2 and 5-12 under 35 U.S.C. §103 as unpatentable over Zdepski et al in view of Van Den Enden (U.S. Patent No. 5,799,128). Applicant/Appellant filed a Request For Continued Examination and an Amendment in response dated May 7, 2009, amending Claims 1, 2, 5, 6, 8, 11 and 12.

The Examiner issued an Office Action dated July 30, 2009, rejecting Claims 1-2 and 5-12 under 35 U.S.C. §103 as unpatentable over Zdepski et al in view of Van Den Enden. Applicant/Appellant's Amendment dated January 27, 2010, was submitted amending Claims 1 and 11.

Finally, on May 25, 2010, the Examiner issued a final rejection. The present appeal then ensued.

37 CFR §41.37(c)(1)(v)
Summary of the Claimed Subject Matter

The claimed invention relates to a method for generating and processing data for the display of a stream of video data on a display screen connected to a data processing apparatus. The method includes the steps of processing a motion picture expert group compliant data stream of video data selected to be used by a user in a first format via the apparatus. The largest frames of the video data are known as I frames. A buffer memory in the apparatus is pre-filled with a first threshold level of video data prior to decoding the video data with the user viewing the same in a first format. A user selects through a selection mechanism to view the video data in an altered format, and in response, the required level of video data to be held in the buffer memory for the altered format is changed to a second threshold level. At the second threshold level, the buffer memory substantially accommodates no more video data than that corresponding to a single I frame, plus a small tolerance percentage value. The buffer memory is filled with video data corresponding to a single I-frame thereby generating an altered format for the video data wherein the altered format is a fast cue or fast review video display.

An explanation of the subject matter defined in each of the claims on appeal referring to the specification and to the drawings follows:

	Claim	Specification
1.	A method for generating and processing data for the display of a stream of video data on a display screen connected to data processing apparatus, said method comprises:	
	processing a motion picture expert group compliant data stream of video data selected to be viewed by a user in a first format via said	Page 2, line 20 through page 3, line 19

	apparatus, the largest frames of said video data known as I frames; pre-filling a buffer memory in the apparatus with a first threshold level of video data prior to decoding said video data, the user viewing the same in the first format; a user selecting with selection means to view said video data in an altered format, and in response: changing the required level of video data to be held in said buffer memory for the altered format to a second threshold level; wherein at the second threshold level the buffer memory substantially accommodates no more video data than that corresponding to a single I frame, plus a small tolerance percentage value; filling the buffer memory with video data corresponding to a single I-frame; thereby generating an altered format for said video data, wherein the altered format is a fast cue or fast review video display.	
2.	A method according to Claim 1 wherein the second threshold level is used in identifying a value of the separation of the encoded frames in the video data bitstream and this value is used as a substitute for various header field values of the motion picture expert group data stream which may be unavailable.	Page 3, line 20 through page 5, line 2
5.	A method according to Claim 1 wherein the second threshold level is set at a value to minimize delay in the transition between the generation of video from the normal and altered video formats.	Page 4, lines 3-12
6.	A method according to Claim 1 wherein the second threshold level of the buffer memory data is estimated by reference to time stamp data transmitted as part of the video data.	Page 4, line 18 through page 5, line 4
7.	A method according to Claim 6 wherein said time stamp data is carried as part of the system layer and allows data in the other levels to be time synchronized by referring to and retrieving a common reference time from said time stamp data.	Page 5, lines 5-7
8.	A method according to Claim 6 including the use of said time stamp data to estimate the size of the I frame data and hence the second threshold level.	Page 5, line 14 through page 6, line 5
9.	A method according to Claim 1 wherein said video data having been transmitted from a location remote to the apparatus is received by the	Page 5, line 14 through page 6, line 5

	apparatus.	
10.	A method according to Claim 9 wherein said apparatus is a broadcast data receiver connected to receive data from a broadcaster.	Page 5, line 14 through page 6, line 5
11.	A method of generating a video display in a first standard motion picture expert group format and a second user selectable fast forward or fast cue format, said method comprises:	
	upon user selection of a fast forward or fast cue format during generation of the display in the first format, obtaining a value indicative of the separation of received encoded frames in a video data bitstream; using said value as a replacement value to indicate a new threshold level of data to be held in a buffer memory device prior to the commencement of the decoding; filling the buffer memory device with video data corresponding to a single I-frame; displaying the frames of said data for the fast forward or fast cue display; and wherein said new threshold level of data is substantially no more than that corresponding to the single largest frame in said video data bitstream plus a small tolerance percentage value.	Page 6, lines 7 through 23
12.	A method of generating a video display as set forth in Claim 11 including the additional step of referring to time stamp data transmitted as part of said video data to estimate said new threshold level of data.	Page 6, lines 7 through 23

37 CFR §41.37(c)(1)(vi)
Grounds of Rejection

The grounds of rejection to be reviewed on appeal are as follows:

Are Claims 1-2 and 5-12 unpatentable under 35 U.S.C. §103 over Zdepksi et al (U.S. Patent No. 6,445,738) in view of Van Den Enden (U.S. Patent No. 5,799,128)?

Is the asserted combination of Zdepksi et al and Van Den Enden to achieve the limitations of the claims proper?

37 CFR §41.37(c)(1)(vii)
Argument

Claims 1, 2, And 5 Through 12 Are Not Unpatentable Under 35 U.S.C § 103(a)
Over Zdepski et al. In View of Van Den Enden.

The asserted combination of Zdepski et al. (U.S. Patent No. 6,445,738) in view of Van Den Enden (U.S. Patent No. 5,799,128), taken together, does not achieve the limitations of independent Claims 1 or 11.

Section 103(a) provides:

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

Notwithstanding the Examiner's assertions, Zdepski does not provide the limitations of independent Claims 1 and 11 as now amended. More specifically, it is clear from Zdepski at column 11, line 58 to column 12, line 64 that the purpose of the memory stack is to store coordinates relating to I-frames and the like in the video stream, not to store the I-frame video data itself. It is noted that column 11, line 54-57 refers to MPEG data being stored in the stack, but this data must correspond to coordinates which are stored or, otherwise, the subsequent paragraphs concerning the generation for a reverse trick play stream would not make sense.

According to Zdepski, the first step is to place a marker in the cleared memory stack to indicate the coordinates in the video stream of the first picture start code (column 11, lines 58-64). It is of specific note that the marker identifies a portion of the video stream and is therefore a set of coordinates corresponding to the first start code. There is no disclosure of storing an I-frame or indeed any other video frames, as alluded to by the Examiner.

The next step involves searching for further start codes in the video stream, and then adding the coordinates of the same to the stack. If the start code relates to an I-frame, the coordinates are removed (such that the most recently added are removed first) and data in the corresponding video stream is written until the marker is detected (column 12, lines 40-56), apparently thereby generating a sequence of I-frames in reverse order which can be stored for trick play use at a later date.

As such, there is no disclosure in Zdepski of pre-filling a buffer memory with a first threshold level of video data prior to decoding the same for normal playback, or indeed pre-filling the same buffer memory with a second threshold level of video data prior to decoding the same for trick mode.

Furthermore, there is certainly no disclosure of changing the threshold level in a buffer in response to a user selection during normal playback. Rather, Zdepski teaches a way of creating and storing a stream for trick mode which is separate to the original stream (column 6, lines 6-45), and thus it is not surprising that there is no disclosure of the buffer memory as described in the present invention, as there is no requirement for the same.

The Examiner repeatedly concedes that Zdepski is silent as to setting the required buffer size at a level value or threshold so as to substantially accommodate the data required to generate in single I-frame. Van Den Enden, however, does not supply the missing claim features. While Van Den Enden detects receipt of an I-frame in order to generate a control signal, it is otherwise dissimilar.

In particular, Van Den Enden does not change the required level of video data held in the buffer memory to a second threshold, fill the buffer memory with video data corresponding to a

single I-frame, and generate an altered format of a fast cue or fast review video display.

While the Examiner, in the Office Action dated May 25, 2010, cited to various portions of the Van Den Enden specification, there is no disclosure of a second threshold level of a single I-frame.

In summary, the combination of Zdepski and Van Den Enden, taken together, does not reach the amended Claims 1 or 11 of the present invention.

The remaining claims are dependent on Claims 1 and 11 and believed allowable for all of the same reasons.

Moreover, the asserted combination of references is untenable. As the Supreme Court recently stated, "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). According to the USPTO's Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR*, found at 72 Fed. Reg. 57,526, 57,528-57,529, the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit.

In the present case, the Examiner states:

Hence it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Van into the system of Zdepski to set the buffer to accommodate data required to generate I frame(s) in order to efficiently process and generate only the primary or initial I-frame(s) required to display a video or image.

These are mere conclusory statements, with no articulated reasoning with rational

underpinnings supporting the legal conclusion of obviousness. In particular, the Examiner failed to resolve the *Graham* factual inquiries, also listed in the Examination Guidelines. In relying on this rationale, the Examination Guidelines quotes *KSR*: “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.* The Examination Guidelines go on to state, “If any of these findings [from the *Graham* factual inquiries] cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.” *Id.* A further argument against the Examiner’s factual findings is not possible, as the Examiner failed to include such factual findings, based on the *Graham* factual inquiries, in the Office Action.

The Examiner applies a combination of two (2) references which lack many of the features recited by Applicant/Appellant, as well as lacking any motivation to change what the references describe. The Examiner has painted with a broad brush of obviousness to create the features recited by Applicant/Appellant, and paints in a conclusory manner without specific findings for her conclusions. It is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention, and the Examiner must avoid the “insidious effect of a hindsight syndrome wherein only that which the inventor taught is used against the teacher.” *W.L. Gore & Associates v. Garlock*, 721 F.2d 1540, 1552-53 (Fed. Cir. 1988). The Examiner has failed to state a prima facie case for the asserted combination.

37 CFR §41.37(c)(1)(viii)
Claims Appendix

An appendix containing a copy of the claims is submitted herewith.

37 CFR §41.37(c)(1)(ix)
Evidence Appendix

None.

37 CFR §41.37(c)(1)(x)
Related Proceedings Appendix

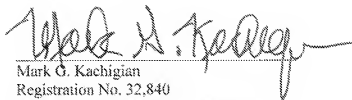
There are no related proceedings.

Summary

For all the foregoing reasons, it is believed that the present rejection should be lifted and that the application should proceed to allowance.

Pursuant to 37 CFR §1.117(f), the \$540 fee for filing the brief has been submitted. The Commissioner is hereby authorized to charge or credit any additional fees which may be required by this paper to Deposit Account No. 08-1500.

Respectfully submitted,



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Date: October 25, 2010

CLAIMS APPENDIX

1. A method for generating and processing data for the display of a stream of video data on a display screen connected to data processing apparatus, said method comprising the steps of:

- processing a motion picture expert group compliant data stream of video data selected to be viewed by a user in a first format via said apparatus, the largest frames of said video data known as I frames;
- pre-filling a buffer memory in the apparatus with a first threshold level of video data prior to decoding said video data, the user viewing the same in the first format;
- a user selecting with selection means to view said video data in an altered format, and in response;
- changing the required level of video data to be held in said buffer memory for the altered format to a second threshold level;
- wherein at the second threshold level the buffer memory substantially accommodates no more video data than that corresponding to a single I frame, plus a small tolerance percentage value;
- filling the buffer memory with video data corresponding to a single I-frame; and
- thereby generating an altered format for said video data, wherein the altered format is a fast cue or fast review video display.

2. A method according to Claim 1 wherein the second threshold level is used in identifying a value of the separation of the encoded frames in the video data bitstream and this value is used as

1 a substitute for various header field values of the motion picture expert group data stream which
2 may be unavailable.

1 3. (Cancelled)

1 4. (Cancelled)

1 5. A method according to Claim 1 wherein the second threshold level is set at a value to
2 minimize delay in the transition between the generation of video from the normal and altered
3 video formats.

1 6. A method according to Claim 1 wherein the second threshold level of the buffer memory
2 data is estimated by reference to time stamp data transmitted as part of the video data.

1 7. A method according to Claim 6 wherein said time stamp data is carried as part of the
2 systems layer and allows data in the other levels to be time synchronized by referring to and
3 retrieving a common reference time from said time stamp data.

1 8. A method according to Claim 6 including the use of said time stamp data to estimate the
2 size of the I frame data and hence the second threshold level.

1 9. A method according to Claim 1 wherein said video data having been transmitted from a
2 location remote to the apparatus is received by the apparatus.

1 10. A method according to Claim 9 wherein said apparatus is a broadcast data receiver
2 connected to receive data from a broadcaster.

1 11. A method of generating a video display in a first standard motion picture expert group
2 format and a second user selectable fast forward or fast cue format, said method comprising the
3 steps of:

4 upon user selection of a fast forward or fast cue format during generation of the
5 display in the first format, obtaining a value indicative of the separation of received encoded
6 frames in a video data bitstream;

7 using said value as a replacement value to indicate a new threshold level of data
8 to be held in a buffer memory device prior to the commencement of the decoding;

9 filling the buffer memory device with video data corresponding to a single 1-
10 frame;

11 displaying the frames of data for the fast forward or fast cue display; and
12 wherein said new threshold level of data is substantially no more than that
13 corresponding to the single largest frame in said video data bitstream plus a small tolerance

14 percentage value.

1 12. A method of generating a video display as set forth in Claim 11 including the additional
2 step of referring to time stamp data transmitted as part of said video data to estimate said new
3 threshold level of data.